

### REMARKS

Claims 1 and 3-7 are pending in the application and have been amended herein. Favorable reconsideration of the application, as amended, is respectfully requested.

## ***I. CLAIM AMENDMENTS***

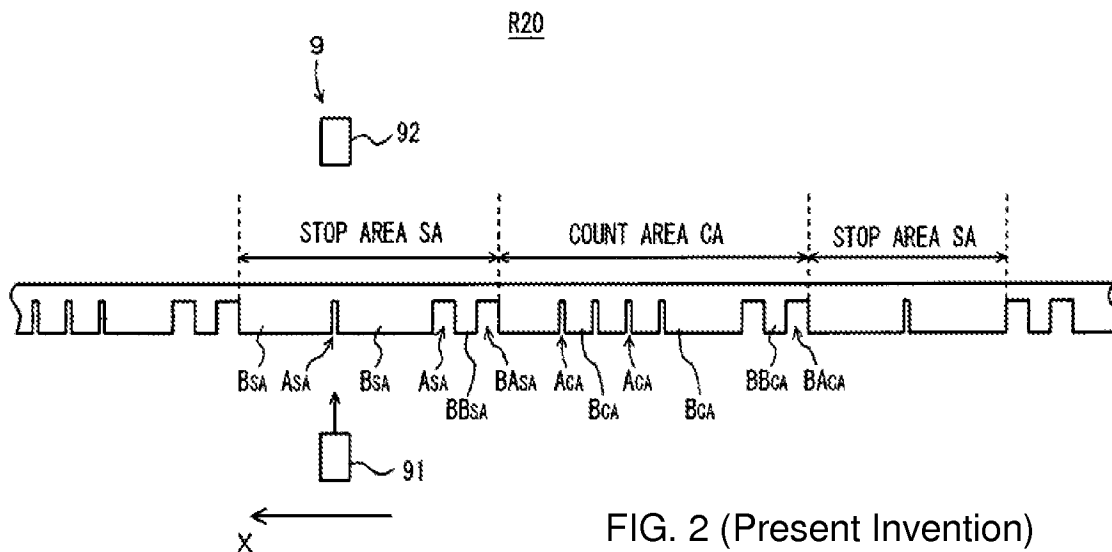


FIG. 2 (Present Invention)

Applicant has amended claim 1 to emphasize particular features of the present invention. With reference to Fig. 2 of the application (reproduced above), for example, it is shown that the rib R20 includes a plurality of count areas CA each for identifying one of the trays and a plurality of stop areas SA for stopping the rotation of the turntable. The stop areas SA alternate with the count areas CA, and each of the count and stop areas including a plurality of recessed portions A<sub>CA</sub>, A<sub>SA</sub> and a plurality of raised portions B<sub>CA</sub>, B<sub>SA</sub>. The plurality of recessed portions A<sub>CA</sub>, A<sub>SA</sub> include an internal recessed portion A<sub>CA</sub>, A<sub>SA</sub> and a boundary recessed portion BA<sub>CA</sub>, BA<sub>SA</sub>. The boundary recessed portion BA<sub>CA</sub>, BA<sub>SA</sub> is formed at the boundary between the count area CA and said stop area

SA. The plurality of raised portions  $B_{CA}, B_{SA}$  include an internal raised portion  $B_{CA}, B_{SA}$  adjacent to the internal recessed portion  $A_{CA}, A_{SA}$  and a boundary raised portion  $BB_{CA}, BB_{SA}$  adjacent to the boundary recessed portion  $BA_{CA}, BA_{SA}$ . A ratio of a width of the boundary recessed portion  $BA_{CA}, BA_{SA}$  to a width of the boundary raised portion  $BB_{CA}, BB_{SA}$  is different from a ratio of a width of said internal recessed portion  $A_{CA}, A_{SA}$  to a width of the internal raised portion  $B_{CA}, B_{SA}$ . A comparator compares the width of the recessed portion and the width of the raised portion adjacent to the recessed portion. (See, e.g., S9 and S17 in Fig. 3). In turn, a controller controls the motor based on the ratio of the width of said recessed portion to the width of said raised portion obtained by a comparator. (See, e.g., Fig. 2 and Spec., p. 4, ln. 11 to p. 5, ln. 9).\\

For reasons detailed below, the cited art does not teach or suggest such features.

## **II. REJECTION OF CLAIMS 1-7 UNDER 35 USC §102/103(a)**

Claims 1-2 and 4-7 stand rejected under 35 USC §102 based on *Sakurai et al.* Claim 3 stands rejected under 35 USC §103(a) based on *Sakurai et al.* Applicant respectfully requests withdrawal of the rejections for at least the following reasons.

The carousel changer according to amended claim 1 uses the ratio of the width of the recessed portion to the width of the raised portion adjacent to the recessed portion. Thus, if the rotating speed of the turntable is changed by frictional wear or the like, the value of the widths of the raised and recessed portions detected by the sensor is changed. However, the ratio of the width of the recessed portion to the width of the raised portion adjacent to the recessed portion is not changed. Therefore, the controller of the present invention can determine the boundary between the count area and the stop area and can control the motor precisely.

*Sakurai et al.* fails to teach or suggest a rib in which the ratio of the width of the boundary recessed portion to the width of the boundary raised portion is different from

the ratio of the width of the internal recessed portion to the width of the internal raised portion. Also, *Sakurai et al.* fails to teach or suggest a comparator comparing the width of the recessed portion and the width of the raised portion adjacent to the recessed portion and the controller controlling the motor based on the result by the comparator as recited in amended claim 1.

More particularly, in *Sakurai et al.* the control circuit 33 determines that the photocoupler 32 ends detection of the stop area, starts to detect the count area when the width of the raised portion is L3 and counts the number of notches 31. The control circuit 33 determines that the photocoupler 32 ends detection of the count area, starts to detect the stop area when the width of the raised portion is L1 and stops the motor at the notch 30. (See, e.g., Col. 5, Ins. 15-28).

The control circuit 33 in *Sakurai et al.* uses the value of the width of the raised portion and it is assumed that the control circuit 33 has a timer counting time for which the photocoupler 32 detects the raised portion to obtain the width of the raised portion. However, the control circuit 33 has not been found to use the ratio of the width of the recessed portion to the width of the raised portion adjacent to the recessed portion as recited in amended claim 1.

If the rotating speed of the turntable is constant in *Sakurai et al.*, the control circuit 33 can obtain the constant value of the widths of L1 and L3 by the timer. Therefore, the control circuit 33 can control the motor precisely. However, if the rotating speed of the turntable in *Sakurai et al.* is changed by the frictional wear of the gear of the turntable or the like, the control circuit cannot control the motor precisely. Such problem with conventional carousel changers is discussed in the present application at page 3, lines 18-23.

As previously noted, the present invention avoids such limitations by using the ratio of the width of the recessed portion to the width of the raised portion adjacent to the recessed portion. Thus, if the rotating speed of the turntable is changed by frictional wear or the like, the value of the widths of the raised and recessed portions detected by

the sensor is changed. However, the ratio of the width of the recessed portion to the width of the raised portion adjacent to the recessed portion is not changed. Therefore, the controller of the present invention can determine the boundary between the count area and the stop area and can control the motor precisely.

*Sakurai et al.* neither teaches nor suggests such features for the reasons expressed above. Nor does *Sakurai et al.* teach or suggest the advantages associated with such features.

Applicant therefore respectfully submits that claims 1 and 3-7 are patentably distinguishable over the teachings of *Sakurai et al.* Withdrawal of the rejections is respectfully requested.

### **III. CONCLUSION**

Accordingly, all claims 1 and 3-7 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Application No.: 10/799,133

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

/Mark D. Saralino/

Mark D. Saralino  
Reg. No. 34,243

DATE: September 5, 2007

The Keith Building  
1621 Euclid Avenue  
Nineteenth Floor  
Cleveland, Ohio 44115  
(216) 621-1113